

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number
WO 2005/055928 A2

(51) International Patent Classification⁷: **A61K**

[US/US]; 1840 Suffolk Road, Upper Arlington, OH 43221 (US). **QIANG, Lu** [CN/US]; 1360 Highland Street, Apt. A, Columbus, OH 43201 (US).

(21) International Application Number:
PCT/US2004/040211

(22) International Filing Date: 1 December 2004 (01.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/526,348 2 December 2003 (02.12.2003) US

(71) Applicant (for all designated States except US): **THE OHIO STATE UNIVERSITY RESEARCH FOUNDATION** [US/US]; 1960 Kenny Road, Columbus, OH 43201-1063 (US).

(74) Agent: **MYERS-PAYNE, Sean, C.**; Calfee, Halter & Griswold LLP, 1100 Fifth Third Center, 21 East State Street, Columbus, OH 43215 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.


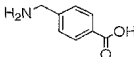

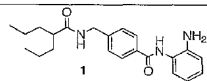
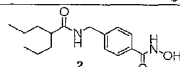
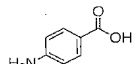
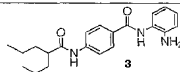
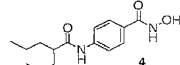
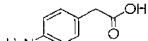
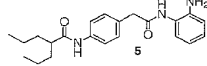
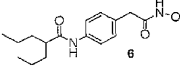
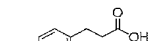
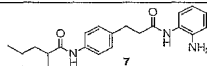
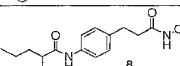
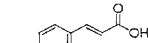
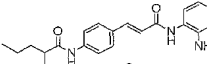
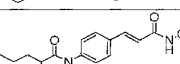
(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHEN, Ching-Shih**

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: **Zn²⁺-CHELATING MOTIF-TETHERED SHORT -CHAIN FATTY ACIDS AS A NOVEL CLASS OF HISTONE DEACETYLASE INHIBITORS**

Valproic acid	Linker	Zn ²⁺ -chelating group	Derivatives
		<p>H₂N—OH</p> <p>or</p> 	 1
			 2
			 3
			 4
			 5
			 6
			 7
			 8
			 9
			 10

(57) Abstract: Zn²⁺-chelating motif-tethered fatty acids as histone deacetylase (HDAC) inhibitors. Compounds performed well in *in vitro* and *in vivo* tests.



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.